

BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER OF

The Resource Management Act 1991

AND

IN THE MATTER OF

three applications by **A N Hope** to take and use water from Grays River (**CRC041542**) and Snow River (**CRC041543**) for spray irrigation of 385 ha at Grampians Station at Haldon Road, Twizel and to discharge surplus irrigation water to Grays River (**CRC041545**)

REPORT AND DECISION OF HEARING COMMISSIONERS PAUL ROGERS,

MICHAEL BOWDEN, DR JAMES COOKE AND EDWARD ELLISON

PART B – SITE SPECIFIC DECISION

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1 INTRODUCTION

- 1.1 This is a decision on three applications by **A N Hope** (the applicant). It is one of many decisions we have made on 104 applications by various applicants for water permits and associated consents in the Upper Waitaki Catchment.
- 1.2 The decision should be read in combination with our Part A decision, which sets out our findings and approach to various catchment wide issues that are common to multiple applications. References to our Part A decision are made throughout this decision as appropriate.

2 THE PROPOSAL

- 2.1 The applicant seeks the ability to spray irrigate 385 hectares of their property known as Grampians Station. The proposal involves two separate water takes from Grays River and Snow River.
- 2.2 The water taken will be used to irrigate three separate areas on the property. Two areas will be irrigated using Grays River water (Pivots A and B) and the other using water taken from Snow River (Pivot C). Surplus irrigation water will be discharged back into Grays River.
- 2.3 Irrigation of the property is to provide the applicant with the ability to maintain feed supplies to the existing stock and reduce overgrazing during dry periods. It will also allow for the farm to intensify due to economic necessity, to make up for stock units lost to tenure review and to allow for improved stock performance. Up to 3200 additional stock units will be run.
- 2.4 The irrigation areas and proposed take and discharge locations are illustrated in Figure 1. Further details on the component parts of the proposal are provided below.

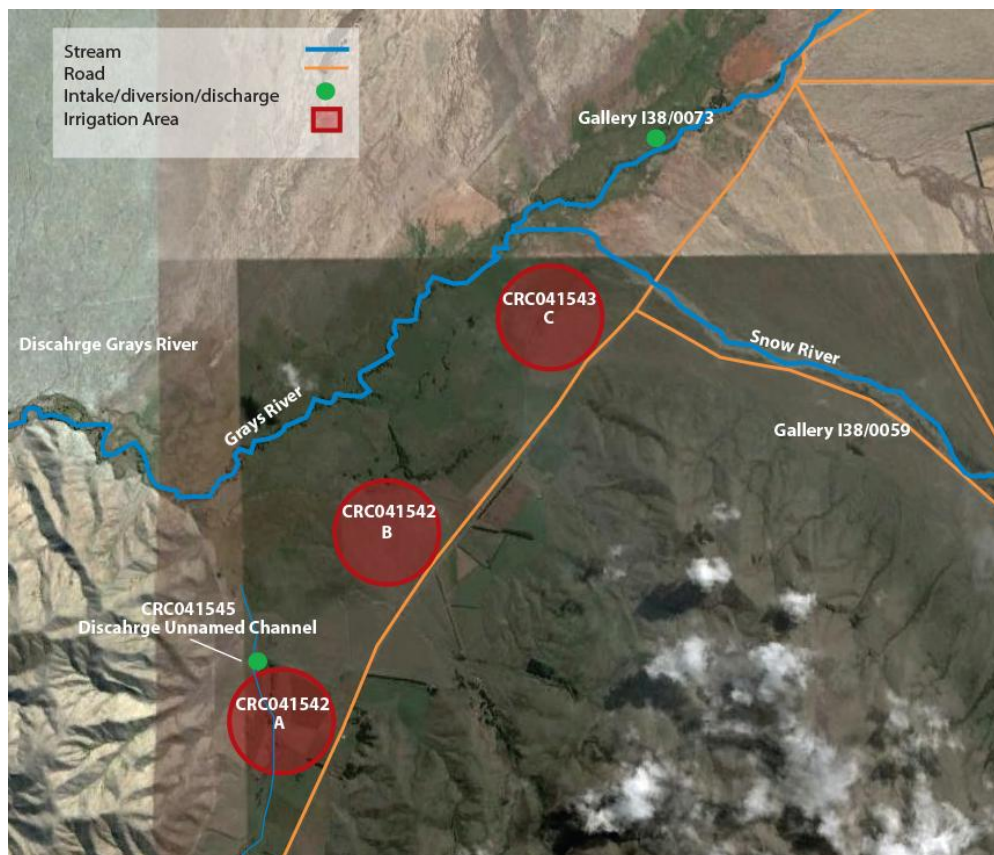


Figure 1: Indicative location plan

Gray River take (CRC041542)

- 2.5 The applicant seeks to take shallow groundwater that is hydraulically connected to the Grays River via a gallery which will be installed adjacent to the Grays River (Gallery I38/0078, as shown in Figure 1 above). The gallery will be 1m deep, 3 metres wide, and begin approximately 10

metres from and extend away from the river. The water will then be transported via a proposed irrigation race to two pivots (A and B).

- 2.6 The maximum rate of take will be 166 litres per second, with a maximum annual volume of 1,677,547 cubic metres per year. Within the 166 litres per second; 29 litres per second has been sought to be taken from the Grays River for the conveyance of water past the irrigators – to ensure the irrigators do not 'suck' in air. Only the remaining 137 litres per second will be used for irrigation. The additional 29 litres per second of conveyance water provides a "buffer" flow in the race and will be discharged into an existing stream channel, as discussed further below.
- 2.7 The applicant has proposed a minimum flow of 1,500 litres per second for the Grays River at Days Bridge, below which abstraction from the Grays River must cease. Above this flow, the amount that can be abstracted will gradually increase, with the full 166 litres per second only able to be taken when flows in the Grays River are at or above 1,850 litres per second.
- 2.8 Water will be taken from the irrigation race for two centre pivots irrigators (Pivots A and B). The water will be used for the irrigation of 238 hectares of crops and pasture for grazing stock, excluding milking dairy cows. The maximum rate of abstraction from the irrigation race will be 137 litres per second and 1,428,000 cubic metres per year.

Snow River take (CRC041543)

- 2.9 The applicant proposes take and use water from infiltration gallery I38/0059 from Snow River at a rate not exceeding 84 litres per year, and a volume not exceeding 882,000 cubic metres per year for the irrigation of 147 hectares of crops and pasture for grazing stock, excluding milking dairy cows.
- 2.10 Water will be taken from the proposed gallery (300 metres long, 5 metres wide) which will be buried approximately 4 metres below the river bed of Snow River. This river is predominately dry, flowing only after heavy rainfall.
- 2.11 Water will be piped from the gallery, along Hakataramea Pass Road to Pivot C, which will irrigate 147 hectares. No discharge is associated with this proposal.
- 2.12 As for the Grays River take, the applicant has proposed a minimum flow of 1,500 litres per second for the Grays River at Days Bridge, below which abstraction must cease. Above this flow, the amount that can be abstracted will gradually increase, with the full 84 litres per second only able to be taken when flows in the Grays River are at or above 1,850 litres per second.

Discharge (CRC041545)

- 2.13 The applicant proposes to discharge unused irrigation water into an unnamed stream channel at or about map reference NZMS 260 I38:0471-5823. The unnamed stream channel is generally dry, predominantly carrying flow after heavy rainfall.
- 2.14 This channel will transport the discharge water to the Grays Hill Swamp and may naturally find its way into the Grays River. The rate of discharge will not exceed 29 litres per second and shall only be unused conveyance water containing no contaminants.

The applications

- 2.15 The proposal involves three separate applications
 - (a) CRC041452 – an application to take and use surface water from Grays River pursuant to section 14 of the RMA.
 - (b) CRC041453 – an application to take and use surface water from Snow River pursuant to section 14 of the RMA.
 - (c) CRC041455 – an application to discharge unused irrigation water to Grays River pursuant to section 15 of the RMA.
- 2.16 Consent is required for the proposal under the Waitaki Catchment Water Allocation Regional Plan (WCWARP) and the Natural Resources Regional Plan (NRRP), as discussed below. All applications were lodged with the Canterbury Regional Council (the Council) on 26 January 2004. The applications were publicly notified and there were a number of submissions that are referred to

later in this decision. The applications are for a new activity and seek a consent duration to 30 April 2025.

Modifications after notification

- 2.17 The following amendments were made to the application since it was notified in 2007:
- (a) The annual volumes for both take applications (CRC041542 and CRC041543) were reduced in February 2009 to reflect to MIC shareholding of the applicant.
 - (b) The proposed minimum flow for these applications was amended in June 2009 as a result of the hydrological analysis for the Grays River catchment undertaken by Mr Richard de Joux, from 1, 800 L/s to 1, 500 L/s.
 - (c) The discharge point for CRC041545 was amended from I38: 0262-6076 (directly to the Gray's River) to I38: 0471-5823 (to land then to water at the end of the irrigation race).
- 2.18 In relation to the change in minimum flow, we discuss this issue further later in this decision as part of the evaluation of effects.
- 2.19 In respect of the change to the discharge location, Mrs Johnston (on behalf of the applicant) said that the application was notified with the grid reference I38:0262-6076. This location was just below the third pivot, but in order to achieve the discharge, a channel would need to be constructed from the irrigation race below the pivot to the Gray's River.
- 2.20 The preferred location of I38: 0471-5823 allows the water to flow on through the irrigation race, and be discharged to an un-used waterway without any earthworks needing to be carried out, and into a "wet area" to the Gray's River. The "wet area" would buffer the discharge
- 2.21 Mrs Johnston said that the "wet area" was on the property of Mr Mark Urquhart and he had no concerns with the applicant's proposed discharge, therefore, she considered that, having regard to S93 and S94 of the RMA, the application does not need to be re-notified, as the effects of discharging at the preferred location are less than the notified application, and Mr Urquhart has given approval.
- 2.22 The general principle for modifications after notification is that amendments are allowed provided they do not increase the scale or intensity of the activity or significantly alter the character or effects of the proposal. The key consideration is prejudice to other parties by allowing the change. In this case, we are satisfied that the above changes (excluding the change to minimum flow, which we return to later) do not significant alter the intensity or effects of the proposal and that no party would be adversely affected by allowing the changes.

Related consents and applications

- 2.23 Resource consent CRC062546 was granted on 30 January 2006 and authorises the construction of Gallery I38/0073, being a ten metre long, three metre wide and one metre deep gallery extending in a north-west direction. We note that this consent expired on 26 January 2011 and, as at the date of the initial s42A report, had not been installed. Gallery I38/0073 would be the structure used to source water for CRC041542.
- 2.24 Resource consent CRC054215 was granted on 27 June 2005 and authorises the installation of a Gallery I38/0059, being a300 metre long, five metre wide and 4 metre deep gallery in a north-south direction. As above, we note that this consent expired on 27 June 2010 and, as at the date of the initial s42A report, had not been installed. Gallery I38/0059 would be the structure used to source water for CRC041543.

3 DESCRIPTION OF THE ENVIRONMENT

- 3.1 The proposed activities are located within the Mackenzie District I and the Mackenzie District Plan applies. The area subject to this proposal as a whole is within an area of Regional Significance.
- 3.2 There is a wetland downstream on the southern side of the Grays River. This is located on land owned by Gray's Hills Station and the owner of this property has worked in conjunction with Environment Canterbury to fence and protect this area.

- 3.3 Gallery intake I38/0073 is located within a native bird habitat which is recognised as a WERI, a SSWI and a Recommended Area for Protection (RAP). This gallery intake is the water source for CRC 04152 which are the 2 southern most pivots of the line of 3.
- 3.4 Gallery intake I38/0059 is located within a RAP of national significance. This gallery is the water source for CRC04153 which is the northernmost pivot of the 3.
- 3.5 The Snow River is a small tributary of the Grays River which drains the western slopes of the Grampians Range. The Snow River is identified as an area of National Significance. An area of the Snow River outwash plains (including the Grays River abstraction site) are identified as a RAP.
- 3.6 The Grays River is located on the eastern fringe of the Tekapo basin and drains the western slopes of the Grampians, Dalgety, Rollesby and Two Thumb ranges. The lower reaches of the Grays River receive some recharge from the underlying gravels which store significant quantities of rainfall and snowmelt. In its lower reaches, the Grays River provides significant fisheries and wildlife habitat (this is consistent with comments made by Fish and Game in their submission in opposition to this application).
- 3.7 The Fish and Game submission and Grampians Station Conservation Resources Report (2003) produced by the Department of Conservation for Tenure Review, provide additional information regarding the landscape and ecological values of the Rivers.
- (a) The Grays River flows across flat arable land, which is dominated by pasture, exotic grassland, depleted fescue tussock grassland and scattered shrubland (brier, matagouri).
 - (b) Wetlands are present on the margins of Grays River. Willow trees are present along the river margins, some have been sprayed. Stock and wild animal access appears unrestricted. Several vehicle tracks cross the streams through fords or over bridges and culverts. The wetland is dominated by exotic species and naturalness is low, except alongside small waterways where it is low/medium.
 - (c) The Grays River is a reputable brown trout fishery and well-used by anglers. Upland bullies, Canterbury galaxias, alpine galaxias, brown trout, rainbow trout, and bignose galaxias have been found in the catchment. Additional species recorded in the New Zealand Freshwater Fish Database are common bully and longfin eel. The presence of bignose galaxias in a springfed tributary of Grays River and of longfin eel in the main channel of Grays River, near the bridge west of the intersection of public roads (Bowie, 2005) is important. The other important feature is that four native species (bignose galaxias, Canterbury galaxias, longfinned eel and upland bully) are all found in the wetland part of the Greys River.
- 3.8 There is one other applicant seeking water from the Grays River catchment with higher priority (Gray's Hills Station – CRC042661).
- 3.9 Further description of the environment is provided in our Part A decision and our summary of the evidence received from the applicants and submitters below.
- 3.10 We detailed our site visits in Part A and we do not repeat this information here. However we do record that as part of our Mackenzie Basin assessment we drove the full length of Haldon Road and while doing so noted the location of this proposed activity.

4 PLANNING INSTRUMENTS

- 4.1 As discussed in our Part A decision, there is a wide range of planning instruments that are relevant under the RMA. This includes national and regional policy documents, along with regional and district plans. The key planning instruments relevant to these applications are as follows:
- (a) Waitaki Catchment Water Allocation Plan (WCWARP);
 - (b) Natural Resources Regional Plan (NRRP);
 - (c) Proposed and Operative Canterbury Regional Policy Statement (CRPS); and
 - (d) Mackenzie District Plan (MDP)

- 4.2 The provisions of these planning instruments critically inform our overall assessment of the applications under s104(1)(b) of the RMA, as discussed in Section 14 of this decision. In addition, the rules within the relevant planning instruments determine the status of the activities, as set out below.

Status of the activity

- 4.3 In our Part A decision we provide a detailed discussion of our approach to determining the status of activities. We now apply that approach to the current applications.

Water takes – CRC041542/3

- 4.4 Both of these applications are listed in Schedule 2 of the Resource Management (Waitaki Catchment) Amendment Act 2004. Section 88A therefore does not apply and the relevant plan for these activities is the operative WCWARP.
- 4.5 The following rules from the WCWARP are applicable to these applications:
- (a) Rule 2 -The applicant seeks to take shallow groundwater (accessing water less than 10 metres below ground level). Table 3, Row xxiv states the environmental flow regime in the relevant surface water body to which the groundwater contributes most of its flow applies. The relevant environmental flow regime is specified in Table 3, row v for the Grays River. However, a lower minimum flow (1.5 cubic metres per second) than that specified in the WCWARP (1.8 cubic metres per second) is proposed.
 - (b) Rule 6 deals with annual allocations limits. For irrigation use, this activity is within the allocation limit for agricultural and horticultural activities.
 - (c) Rule 16 – classifying rule – non-complying activity
- 4.6 The proposed water takes are **non-complying activities** under Rule 16 of the WCWARP and resource consent is required in accordance with section 14 of the RMA.

Discharge – CRC041545

- 4.7 This application is listed in Schedule 2 of the Resource Management (Waitaki Catchment) Amendment Act 2004. Section 88A of the RMA therefore does not apply and the relevant plan for determining the status of this activity is the operative NRRP.
- 4.8 The relevant provisions of the NRRP are as follows:
- (a) Rule WQL1 – permits the discharge of water into a river, subject to compliance with a range of conditions
 - (b) Rule WQL48 – provides for the status of a discharge to water where it fails to comply with any of the conditions in WQL1. Will be classified as either a discretionary or non-complying activity, depending on whether it complies with the listed conditions.
- 4.9 The discharge is unlikely to meet conditions 1 and 3 of Rule WQL1; therefore the activity is classified under Rule WQL48. The activity is likely to comply with the conditions of that rule; therefore, the discharge is classified as a **discretionary** activity.

Overall status of proposal

- 4.10 Based on the above, the water takes are non-complying activities, but the proposed discharge is discretionary. We set out our approach to “bundling” of consent applications in our Part A decision. In this case, we consider that the discharge is an intrinsic part of the proposal and the effects of the activities overlap. We therefore consider that the bundling of the three applications for status purposes is appropriate and have assessed the entire proposal as a **non-complying** activity.

5 NOTIFICATION AND SUBMISSIONS

- 5.1 The application was publicly notified on 4 August 2007 and 23 submissions in total were received, including:

- (a) 3 in support;
- (b) 18 in opposition; and
- (c) 2 neither in support nor opposition.

5.2 Table 1 is based on the relevant s42A reports and summarises those submissions that directly referenced the application. In addition to those listed, there were other submitters that presented evidence at the hearing that was relevant to this application. The relevant evidence from submitters is discussed in more detail later in this decision. Please note that all submissions hold equal importance, even if not specifically listed below.

Table 1. Summary of submissions on the proposal

5.3 Submitter	5.4 Reasons
Mr S Carswell	Degradation of water quality
Fish and Game	Concerned with effects of proposals on sport fish and game bird species. Gray's River and tributaries very popular with anglers
Upper Waitaki Community Irrigation	WAP allows for use of water for irrigation, applications consistent with objectives of the WAP.
Meridian Energy Limited	MIC shares, flow regimes, metering, water quality
Ms J Zusters	Adverse effects on the natural landscape values of the Mackenzie Basin and upper Waitaki catchment from infrastructure and water application.
Ms J Kollmann	
Ms R Williams	
M A Rose	

5.5 Overall the key issues of concern to the submitters were effects on: ecosystems, water quality, allocations, minimum flows, natural character and landscape, efficiency and cultural values

6 THE SECTION 42A REPORTS

- 6.1 Three separate section 42A reports on the applications and submissions were prepared by the Council's Consent Investigating Officer, Ms Susannah Vesey (Reports 20A-C).
- 6.2 The primary reports were supported by a number of specialist s42A reports prepared by Messrs Heller, Hanson, Glasson, McNae and Stewart, and Drs Clothier, Schallenberg, Meredith and Freeman. The key issues addressed by these reports were cumulative water quality effects, landscape effects, and environmental flow and level regimes.
- 6.3 All reports were pre-circulated in advance of the hearing. We have read and considered the content of the reports and refer to them as relevant throughout this decision. Specific points noted from the s42A report are summarised below.

Ms Vesey

- 6.4 In relation to the proposed take and use of water, Ms Vesey was not satisfied sufficient mitigation has been proposed to ensure the adverse effects of the proposed activity on the environment would be minor on:
 - (a) Ecosystems - proposed minimum flow was lower than that specified in the WCWARP;
 - (b) Landscape values within the Waitaki basin - no measures had been proposed to mitigate possible effects on landscape values;
 - (c) Localised and cumulative impacts on surface water quality - no mitigation measures had been proposed to address the water quality impacts that could arise from irrigation at this site. The impact on water quality may therefore not be acceptable;
 - (d) Effects on cultural values in the area - the applicant had not provided any assessment on cultural values and there were outstanding submissions from Runanga in opposition to this proposal.

- 6.5 She also considered that the applications may be contrary with the objectives and policies of the CRPS and WCWARP. As such she could not recommend this application can be granted. We return to the outstanding issues identified by Ms Vesey after summarising the applicant's case.
- 6.6 In relation to the proposed discharge, Ms Vesey was satisfied that the actual and potential effects of the proposed activities were acceptable.

Mr Stewart

- 6.7 Mr Stewart (Hydrologist, Rain Effects Limited) was the S42A Officer for hydrological effects. His S42A report was divided into two parts. Part A provided an overview of the environment in the Waitaki catchment, the methods used to calculate a minimum flow and comments on the current minimum flows specified in the WCWARP. Part B of his S42A report provided a specific audit of each application, including Grays River.
- 6.8 Mr Stewart noted that the minimum flow for the Grays River in the WCWARP is 1,800 L/s. He confirmed that this is based on the 5Y7DLF for this site as calculated by the Council and acknowledged that in effect the underlying intention of the 1,800 L/s in the WCWARP is to specify the 5Y7DLF.
- 6.9 According to Mr Stewart it appears that when the Tekapo River was a natural flowing river, it contributed about 3,000 L/s to the Grays River in its lower reaches through groundwater interchange. He added that with the reduction of the Tekapo River's flows, the Grays River's flow, immediately upstream of its confluence with the Tekapo River, had fallen by about 3 cumecs.
- 6.10 Mr Stewart noted that after much discussion and new analyses, the applicant amended their proposal to include a minimum flow of 1,450 L/s. Mr Stewart noted that this has subsequently been increased to a minimum flow of 1,500 L/s. Mr Stewart agreed that a flow of 1,500 L/s should be adopted as the 5Y7DLF for the Grays River at Days Bridge.
- 6.11 The only way to properly determine a more reliable minimum flow is to undertake continuous flow measurement at the Days Bridge site for a period of at least 5 years according to Mr Stewart. He noted that the Council has proposed to install a continuous water level recorder at the Days Bridge site before the end of 2009.
- 6.12 If these applications are granted, Mr Stewart recommended that a minimum flow site for Grays River at Days Bridge is included and a flow of 1,500 L/s would be appropriate. He also recommended that the other provisions set out in Table 3 of the WCWARP for Grays River should apply.

Mr Glasson

- 6.13 Mr Glasson (landscape architect) provided an assessment of the proposal on landscape values. In his opinion, due to the close proximity of these three sites to the Haldon Road, the geometric shapes and the impact these sites will have on the panoramic view of the basin and mountains and the presence of the pivot structures, the adverse effects will be moderate to significant. He noted that no mitigation measures have been proposed.
- 6.14 Mr Glasson said that the foreground to Haldon Road is a very important part of this panoramic view to the Southern Alps. Having considered all the realistic mitigation measures, he considered that the irrigation development would still have significant adverse landscape effects. He recommended that an alternative site on the property be found.

7 THE APPLICANT'S CASE

- 7.1 Legal counsel for the applicant, Mr Ewan Chapman, presented opening submissions and called evidence from Ms Keri Johnston, Chartered Engineer, Mr Richard de Joux, hydrologist. In addition general briefs of evidence on behalf of all UWAG applicants were presented by Mr Robert Batty (Planner), Mr Andrew McFarlane (Farm Management Consultant) and Mr Andrew Craig (Landscape Architect). We have summarised the key points from submissions in evidence below.

Opening legal submissions

- 7.2 The applicant is part of the Upper Waitaki Applicant Group (UWAG), as described in our Part A decision. Mr Ewan Chapman presented comprehensive opening legal submissions on behalf of all UWAG applicants. He said that there may be matters of a specific legal nature relating to certain

applications and those issues will be raised when the specifics of the applications were discussed in closing.

- 7.3 Mr Chapman told us that UWAG represents some 72% of all applicants for water takes. This equates to 31% of the total water volume applied for (excluding stockwater and non-consumptive diverts) and 29% of the total irrigable area.
- 7.4 Mr Chapman emphasised that despite the collective approach adopted for these hearings, each application needs to be considered in isolation from others (allowing for priorities). However Mr Chapman noted that UWAG is not producing any other evidence to support its own assessments of cumulative effects and adopts the MWRL evidence to the extent that it defines nodal thresholds.
- 7.5 While raising some challenge to the outcomes of the mitigation measures proposed by MWRL resulting from the WQS study, Mr Chapman told us that the UWAG members were not presenting their case to say that they cannot or will not meet an area-based NDA threshold. To the contrary, he said that we would be shown that they have taken the model and applied it to all properties and will, with mitigation, meet the thresholds.
- 7.6 Mr Chapman then addressed us on the issue of allocation of assimilative capacity. He contended the approach taken by MWRL that essentially resulted in some farming units mitigating for the nutrient loss of other farming units, was inappropriate. He submitted a more appropriate method of allocation is on the basis of productive use of land. The productive use of the land he said represents the level of nutrient discharge of each farming unit and that should be used; and that the method of allocation based on dividing allocation on a per hectare basis should not be utilised.
- 7.7 He submitted that by assessing allocation of assimilative capacity on the basis of productive land use to reflect the NDA for each unit, these methods would be more representative and realistic of the nutrient discharge of each farming unit.
- 7.8 In terms of conditions concerning the nodal approach, he told us the essential issue lies with pinpointing who is exceeding their NDA if exceedances are detected at the nodal point. He told us the UWAG applicants' preference is for on-farm management of total nutrient discharge and annual auditing of individual FEMPs. He then referred us to a draft condition from the Rakaia Selwyn groundwater zone hearing, noting it was a very much site-specific condition.
- 7.9 He submitted that on-farm monitoring should be favoured over monitoring at nodal points. He said this did bring in the practicalities of the purpose of employing the FEMP with the result that if a breach of the FEMP occurs, the consent authority would have control to enforce the conditions of the consent against the individual applicant. It also reflects the reality that each farm will be different depending on the type of activity that is undertaken on that farm with their individual tailored farming management practices.
- 7.10 Mr Chapman also said that UWAG had not tabled a final set of conditions or final farm management plans. These matters would be worked through and provided to all parties as the hearing progressed. UWAG was of the view that one suite of conditions was inappropriate. There were variables between sub-catchments, take points, and the "type" of consent applied for which would mean that individual conditions would need to be worked through.

Mrs Johnston -Chartered Engineer

- 7.11 Mrs Johnston said that the applicant farms Grampians Station, situated at the head of the Hakataramea Pass, down to the Grays River swamps. The property currently runs sheep and beef cattle and the applicant proposes to irrigate 385 hectares using centre pivot irrigation, irrigating pasture used predominantly for sheep grazing with some cattle at approximately the same ratio's as are carried now. The property is part leasehold and part freehold, and carries 21,000 stock units (17,500 as sheep and 3,500 as beef cattle).
- 7.12 Mrs Johnston said that tenure review is inevitable, and will result in a loss of grazing area on the higher country currently grazed. Therefore, there could be a considerable loss of carrying capacity (estimated to be in the order of 4,000 to 5,000 stock units).
- 7.13 Two hundred and thirty eight hectares would be irrigated with water from the Grays River at a rate of 166 L/s to supply two centre pivots and one hundred and forty seven hectares will be irrigated with water from Snow River at a rate of 84 L/s to supply one centre pivot.

- 7.14 Mrs Johnston said that both takes would utilise an infiltration gallery adjacent to each stream (not in the active channel) to abstract water. The galleries will be covered with coarse aggregate and the amount of water taken controlled by gates on the outlet pipe of the gallery and then to a flow measuring device.
- 7.15 For the Grays River pivots, whilst 166 L/s would be abstracted, 29 L/s would be returned to the river. This is because water flows under gravity to the pivots from the gallery via an open race. Water is only pumped at the point where the race is closest to the pivot centre. If only the rate needed to be abstracted (in this case 166 L/s) flowed in the race, the pump would be working to abstract all available water, and this would result in the water in the race to vortex and the pump would suck in air, and eventually over-heat. The additional water flow of 29 L/s stops this from happening by providing a "buffer" flow in the race.
- 7.16 Mrs Johnston said that the applicant believes that irrigation would provide the means to maintain the feed supplies to the existing stock and reduce any overgrazing during dry periods. It would also allow for intensified farming because of economic necessity (high operating costs) and also allow for making up the stock units lost to tenure review. It would also allow for improved stock performance.

Grays River

- 7.17 Mrs Johnston said that the Grays River is located on the eastern fringe of the Tekapo Basin and drains the western slopes of the Grampians, Dalgety, Rollesby and Two Thumb ranges. The river discharges into the Tekapo River approximately 19.5 km upstream of Lake Benmore. She said that in its lower reaches, the Grays River provided a significant fisheries and wildlife habitat.
- 7.18 Mrs Johnston said that Mr de Joux's evidence (discussed below) was in the main based on the assumption that the minimum flow for Grays River at Days Bridge as defined in the WCWARP was based on historical data and because of changes to Meridian's operations his opinion was that the minimum flow should be reduced from 1800 L/s to 1500 L/s.
- 7.19 Lack of flow data at the minimum flow site had led to the use of correlated flow analyses to establish flow data at the Days Bridge site and some correlation relationships have very low reliability.

Effects on other users

- 7.20 Mrs Johnston said that both applications were new takes. The takes were within the allocation limit set for the Grays River Tributaries in Table 3 of the WCWARP of 500 L/s. There were no other users on Snow River and there was only one other user on the Grays River (Gray's Hills Station), who had a resource consent for 150 L/s and one in process for 100 L/s. The applicant and Gray's Hills Station had agreed to establish a flow sharing regime.
- 7.21 Mrs Johnston said that mitigation is proposed restricting the rate of take and volume per week. Given this, effects on other users are considered to be minor. The section 42A reporting officer for these applications also agreed that effects on other water users are minor.

Effects on Ecosystems

- 7.22 Both the section 42A reporter and Mrs Johnston agreed the locating the galleries away from active channels eliminated the need for fish screens.
- 7.23 Mrs Johnston said that the applicant proposed a minimum flow of 1,500 L/s to be measured in the Grays River at Days Bridge. This was less than the minimum flow specified for the Grays River in the WCWARP of 1,800 L/s as it was believed that the 1 in 5 year, 7 day low flow value in the WCWARP was incorrect. Mr Richard De Joux presented further information on this matter (as discussed above) and her understanding was that Fish and Game and the Department of Conservation have agreed to the proposed minimum flow as part of Mr David Stewart's report (CRC Surface Water Hydrology).

Effects of inefficient use

- 7.24 The irrigation annual volume proposed by Mrs Johnston was determined using the MIC share agreement of 600mm/ha/year. She said that this was a lesser volume than that determined using Schedule WQNv2. She also said that the proposed application depth of 15 mm per return

period is less than 50% of the water holding capacities expected which was considered to be an efficient use of water.

- 7.25 Mrs Johnston then discussed Policy 19 of the WCWARP which encourages piping or sealing distribution systems. She said that this would be a new race system and with modern construction techniques, losses from race systems were now minimal and it was expected that this would be the case in this instance.
- 7.26 Policy 21 of the WCWARP requires all water takes to be metered. To ensure that this application is consistent with this policy, the applicant proposed to meter their take.
- 7.27 Given this, effects of inefficient water use are considered by Mrs Johnston to be minor.

Effects on Water Quality

- 7.28 Mrs Johnston said that cumulative effects on water quality have been addressed by Mackenzie Water Resources Limited (MWRL) and she summarized the Station’s involvement in the proposal to mitigate cumulative effects.
- 7.29 Mrs Johnston said that the calculated nutrient mitigation requirement of the receiving environments determined in the MWRL Study has identified an N and P threshold for each property.

	Nitrogen Threshold (kg/farm)	Phosphorous Threshold (kg/farm)
MWRL Water Quality Study Property Thresholds	58,120	1,240
OVERSEER® outputs	48,102	177

- 7.30 OVERSEER® had been run by a qualified person to model the N and P outputs from the proposed farming system. The results of the model have been incorporated in to the table above. Mrs Johnston believed that the table showed that the applicant could meet the property thresholds proposed by the MWRL study.
- 7.31 Mrs Johnston also confirmed that the applicant was committed to implementing the "Mandatory Good Agricultural Practices" set out within the FEMP (see Appendix E). Implementing those practices ensured that the OVERSEER® results were validated. This along with ensuring that the property thresholds of the WQS (set out in the table above) were not exceeded would in Mrs Johnston’s view ensure that the cumulative effects of the use of water for irrigation on water quality were no more than minor.
- 7.32 Furthermore whilst the applicant was within their property thresholds, the MWRL Study identified that the applicant still had to consider specific on farm effects and the impacts these activities could have on the local receiving environment. This required a specifically developed Farm Environmental Management Plan (FEMP) to identify and implement appropriate mitigation measures set out in the FEMP.
- 7.33 Mrs Johnston then described how at a workshop held in Twizel in August 2009, the applicants met with Dr Melissa Robson of GHD Limited. A "desk top" on farm risk assessment was undertaken.
- 7.34 The workshop identified potential on farm risks specific to each farm along with possible mitigation measures. The on farm risks identified during the desktop risk assessment need to be verified by an appropriately qualified person who has carried out a site visit. It is anticipated that this will occur should the applications be granted.
- 7.35 For Grampians Station, the following potential risks were identified:
 - (a) Runoff from winter feed crops

- (b) Laybacks from waterways during fertiliser application
 - (c) The wetland that receives excess water
 - (d) Fencing off water races
- 7.36 Mrs Johnston said that the applicant had committed to carrying out a full on farm risk assessment, proposing mitigation, monitoring and auditing will occur prior to the commencement of the consents
- 7.37 Mrs Johnston's opinion was that given the N and P thresholds from the MWRL Study could be met, and the applicant's commitment to addressing on farm risks with the implementation of the FEMP, the effects of the use of water on water quality for both the local receiving environment and cumulative effects were considered to be minor

Effects on People, Communities and Recreational Value, Including Landscape

- 7.38 Mrs Johnston said that Landscape effects have been addressed by UWAG's Landscape Architect, Mr Andrew Craig, who considers that this proposal will have a minor effect on landscape values. We discuss Mr Craig's evidence below.
- 7.39 These are applications for "new" water, however, part of the property was already irrigated and part of a substantially modified rural environment, whereby cultivation, and fencing occur regularly. Mrs Johnston said that greening of this specific area of land occurs seasonally during the irrigation season, which was a temporary effect that was already experienced in this location with the applicant's existing consent and others nearby.
- 7.40 It was Ms Johnson's opinion that the activities all occur in a rural setting, where the dominant land use was pastoral farming and the proposed activities all occur on private farmland as such the use of water was unlikely to adversely affect amenity values.
- 7.41 Therefore, given the applicant's commitment to ensuring efficient use of water on their properties, and that the take is within allocation limits set to protect in-stream values and other users, Ms Johnson considered that effects on people and communities will be minor.

Effects on Tangata Whenua Values

- 7.42 Te Runanga O Ngāi Tahu submitted on all applications in the catchment, seeking that all applications be declined.
- 7.43 As Mrs Johnston understood the primary reasons for this were that the applications were considered to be inconsistent with the policies and objectives of the WCWARP, and also at odds with the cultural objectives of the RMA. The application was entirely within the allocation limits defined by the WCWARP even though an alternate minimum flow is now proposed.
- 7.44 However, Mrs Johnston acknowledged that Te Runanga O Ngāi Tahu have a significant relationship with the Waitaki Catchment, and as such, appropriate minimum flow conditions, and management of water quality effects was proposed by the applicant to ensure that the potential effects on the environment, including tangata whenua values are minor.

Mr de Joux - Hydrology

- 7.45 Mr Richard de Joux (hydrologist, Environmental Consultancy Services Ltd) described the setting of the Grays River in his evidence. He detailed previous estimates of the 5Y7DLF, based on historic gaugings, and noted that correlation was poor. He added that it was his understanding that this correlation was used to determine the current minimum flow of 1,800 L/s at Days Bridge.
- 7.46 Mr de Joux commented that the reduced flows in the Tekapo River, from hydro-development in the 1980's had affected groundwater flow into the Grays River. He calculated the relevant contribution based on more recent gauging and correlation with the Forks River. In his opinion the reduced flows within the Tekapo River have reduced flows in Grays River, at Days Bridge by approximately 500 L/s. He estimated the 5Y7DLF was 1,238 L/s, but acknowledged that the correlation coefficient was poor. He noted that Council Staff disagreed with this assessment.

- 7.47 Council staff were of the view that a better correlation of Grays River flows could be obtained using the Mary Burn flow recorder site. Using that information, Mr de Joux obtained a correlation of 0.8736 and an estimated 5Y7DLF for the Grays River of 1,570 L/s.
- 7.48 Mr de Joux then calculated the 5Y7DLF based available data for 2007-2008 gaugings, which were undertaken during low to median flow range. This estimate provided a correlation coefficient of 0.9637 and in Mr De Joux view is superior to any previously obtained correlation. The estimated 5Y7DLF from this data is 1,450 L/s.
- 7.49 Mr de Joux concluded that in his opinion, it is clear that there has been a reduction in flow rates within the Grays River since the 1980's. For this reason he does not believe it is justifiable to include all historic gaugings (pre Tekapo diversion) when trying to derive a 5Y7DLF minimum flow that is representative of the present day hydrology.
- 7.50 Mr de Joux initially recommended that the minimum flow for the Grays River at Days Bridge should be 1,240 L/s. However he noted that there had been discussions between the applicant, Council staff and submitters regarding an appropriate minimum flow for the Grays River at Days Bridge. This discussion resulted in an agreement of 1,500 L/s as the most appropriate flow for the 5Y7DLF at Days Bridge. Mr de Joux added that it is understood that this flow would be reviewed once more accurate assessments of the flow are obtained following the installation of a flow recorder at Days Bridge.

Mr Andrew Craig – landscape architect

- 7.51 Mr Andrew Craig gave his evidence in two parts. The first part dealt with the general landscape and his overview of the Upper Waitaki landscape and its values. The second part of his evidence dealt more directly with the individual applications.
- 7.52 In his part A evidence, Mr Craig discussed in detail Mr Glasson's mitigation approach and tools, and addressed us on statutory matters concerning the effects of landscape. Broadly, for reasons advanced in Part A, we agree with Mr Craig's assessment of the statutory planning documents in terms of landscape.
- 7.53 Unlike other applications by UWAG members, Mr Craig did not present a separate brief of evidence in respect of the current application. The reason for this was that he only prepared a separate brief of evidence where he considered the proposed irrigation was on a sensitive site. Visual sensitivity was determined by the location of publicly accessible vantage points and the views that could be had from them in relation to irrigation areas. In relation to the current application, Mr Craig considered that it was not a sensitive location in terms of landscape and that the proposal would therefore not negatively impact on landscape values.
- 7.54 We do note however that Mr Craig provided a supplementary brief of evidence assessing this proposal as part of the applicant's right of reply. We discuss this evidence below.

Mr Robert Batty, planner

- 7.55 Mr Batty addressed us in relation to planning issues. He set out his broad view as being:
- (a) whether or not granting any of the applications before us, including this application, would undermine the operational integrity of the WCWARP, regional plans and district plans;
 - (b) whether cumulative effects would arise from a grant;
 - (c) whether grants would promote reasonable efficiencies and sustainable management of the natural and physical resources concerned; and
 - (d) whether the grant of consent would derogate from any other consent.
- 7.56 He was critical of the section 42A officers' collective approach and suggested each application needs to be considered on its own merits. A move away from the generic approach of the reporting officers was required, he said, to enable a proper analysis of each application to occur.
- 7.57 He supported Mr Kyle's planning analysis on behalf of MWRL and he set out for us relevant policies and objectives in the district and regional plans. In conclusion, he was of the view that granting this consent and all other UWAG consents was appropriate.

Mr Andrew Macfarlane, farm management consultant

- 7.58 Mr Macfarlane is a farm management consultant with 29 years experience. He provided us evidence on behalf of all of the UWAG applicants.
- 7.59 He assessed the viability of the farm management plans and practicality and robustness of the mitigation measures and the ability to monitor progress.
- 7.60 He discussed a range of mitigation measures that had been examined and/or adopted by the UWAG farmers to deal with discharges from their properties consequent upon irrigation.
- 7.61 Mr Macfarlane also discussed with us the costing of various typical irrigation developments.
- 7.62 He considered on-farm monitoring, noting that on-farm monitoring had lifted in its intensity and in detail over the last 10 years, being driven by economic returns and a need to prove environmentally sustainable methods were being utilised. Overall, he held a high degree of confidence in progress concerning the ability to monitor and interpret interfaces between environmental science and management.
- 7.63 He raised with us the advantages of reliable availability of water and pointed out for us the benefits of irrigation, noting that while generally irrigation typically only represents a small part of the total farm area, but it does result in high productivity increases with a resultant favourable impact on economic viability of farming operations. He concluded with the correct planning, management and monitoring any negative environmental impact of intensification of a small area would lead to positive environmental outcomes on the balance of the property. It was his view a net positive balance was certainly possible.

8 SUBMITTERS

- 8.1 Set out below is the summary of the issues raised by submitters who appeared before us. We emphasise that we have read and considered all submissions made, both in support and in opposition to the application, as well as reviewing and carefully considering evidence advanced before us.

Fish & Game

Mr Frank Scarf

- 8.2 Mr Frank Scarf (representing Fish and Game as a Hydrologist) stated the only issue (from Fish and Game's perspective) surrounding the proposed water takes from the Grays River relates to minimum flow. Following detailed analysis of concurrent gauging data Mr Scarf acknowledged that there is consensus among hydrologists acting for various parties that the 5Y7DLF for Grays River at Days Bridge is ~1,500 L/s and less than the 1,800 L/s referred to in the WCWARP.
- 8.3 Mr Scarf noted that he was satisfied that if the Waitaki Catchment Water Allocation Board (which set the flow in the WCWARP) intended that a 5Y7DLF equivalent is appropriate for the Grays River, then 1,500 L/s is the best estimate at this time.
- 8.4 Despite this, Mr Scarf put forward his view that any parties seeking to change any of the minimum flows and allocation provisions established by the WCWARP should do so through a Plan change as opposed to the consents process. In the event that a Plan change is sought, he would support an application to reduce the minimum flow from 1,800 L/s to 1,500 L/s. However until that occurs, if the application is granted it should, in his opinion, be restricted to a minimum flow of 1,800 L/s at Days Bridge. He also added that the applicant should be restricted to the annual volumes detailed in the S42A Report.

Mr Mark Webb

- 8.5 Mark Webb (representing Fish and Game as a sports fish and game bird ecologist) provided an overview of the Grays River Trout fishery. He noted that trout spawning surveys over three years suggest spawning use of the Grays River is currently quite stable and amounts to about 100 brown trout and 100 rainbow trout annually. Mr Graeme Hughes (Fish and Game Officer) also provided a description of the Grays River and its trout fishery.
- 8.6 Mr Webb noted that there are no issues of significance in the area of the applicant's intake drain for trout or game birds and their habitats. However he shared Mr Scarf's opinion that the

minimum flow should be 1,800 L/s at Days Bridge as provided in the Plan. He considered that the consent application process does not provide the opportunity for review of minimum flows in the Plan.

Meridian Energy Ltd

- 8.7 Mr Richard Turner, Planning Manager – Natural Resources, Meridian Energy Ltd, tabled a list of consent applications which were of a concern to MEL from a cumulative water quality perspective based on the sub-catchments in which the properties were located relevant to Meridian's operations and areas of interest.
- 8.8 The Meridian Energy approach was adopted for two reasons:
- (a) the potential environmental effects and impacts on hydro-energy generation operations from intake blockages from macrophyte and periphyton growths and the associated increases in operating and maintenance costs and generating efficiency.
 - (b) The lack of any cumulative or comprehensive water quality assessment in the resource consent applications that were notified, making it difficult to consider the actual and potential adverse effects of the applications on the operation of the Waitaki Power Scheme.
- 8.9 The current applications were included in the Meridian Energy Ltd list of consent applications of concern. The principle concern in respect of the sub-catchment concern was in quantifying the nutrient thresholds to ensure that a TLI in Lake Benmore did not exceed 2.75, based on a summer average. Also water quality concerns in respect of the Tekapo River.
- 8.10 Meridian Energy through Mr Turner also expressed concern this applicant had not complied with the derogation approval and their proposed conditions did not reflect the common consent conditions that were agreed between Meridian and the applicant prior to derogation approval being provided.

Mackenzie Guardians – Dr Susan Walker (ecologist)

- 8.11 We note that Dr Walker gave comprehensive evidence on the cumulative effects of irrigation on vegetation on the Mackenzie Basin. This evidence is discussed in Part A. Her evidence being Basin-wide included that a more in-depth investigation of the individual sites was required. However, she did provide us with Attachment 15, which contained her more particularised reviews in respect of each site.
- 8.12 In terms of her assessment as per Attachment 15, Dr Walker assessed The Grampians/Hope Station as a whole as being approximately 53% converted. She considered that the potential effects of irrigation on terrestrial biodiversity were there greatest. She noted that the application sites are partly developed but in her opinion overlaps significant inherent values identified within the tenure review. She considered an important contribution to the intact ecological sequences in the north and east of the basin would be lost if irrigation took place on the site.

Mackenzie Guardians – Ms Di Lucas

- 8.13 Ms Di Lucas on behalf of Mackenzie Guardians provided us with a broad ranging brief of evidence, much of which we have already commented upon in Part A.
- 8.14 In terms of this particular "take" application, she identified it as being within her Tekapo System. In her graphics the site was shown as in attachments 24 and 25. She noted that the site was half cultivated and she gave the site a naturalness breaking of 3 with 5 being the highest score. She noted that shrublands were evident on the land around Snowy River.
- 8.15 She considered the aesthetic values of the naturalness of this area and its visual connection to the wide open spaces as being highly valued. She considered the site contributed to the open and natural character of the Haldon Road corridor which was an important recreational route to Benmore. She was of the view that intensive irrigation and likely associated shelter belts close to the road would reduce this outstanding natural landscape and amenity values.
- 8.16 In respect of the two southern sites she noted that they joined the Haldon Road on the Tiedmont Fan. She drew attention to the ephemeral streams close to the site that meander over the floodplain and through the swamp area.

- 8.17 She noted that the northern site is opposite the Grampians driveway which she considered contributes importantly to the Haldon Road corridor. She noted that the aesthetic values of the naturalness of this area and its connection to the wide open basin landscape have long been valued and she presented some paintings to support that view.
- 8.18 Overall she was of the view that the proposals either should be relocated or alternatively they should be declined.

Mr Horgan – Te Runanga o Ngāi Tahu

- 8.19 Mr Horgan told us that Ngāi Tahu had taken a balanced approach when assessing the applications and resisted the temptation to simply oppose all applications in their entirety. More particularly, Ngāi Tahu has generally placed its emphasis upon the new (rather than replacement) consent applications and those that will result in large scale land use intensification, rather than the taking of water so as to provide security of supply for existing farming operations.
- 8.20 Mr Horgan told us that Ngāi Tahu had adopted two focal points against which they assessed the applications, the area of the Lower Tekapo River and Haldon Arm were one of these as they were among the most acute receiving environments for the discharge of nutrients from the irrigation proposals before this hearing. He told us it was also a location where Ngāi Tahu proposes to undertake mahinga kai restoration.
- 8.21 Mr Horgan told us that Ngāi Tahu have an enduring relationship with the Upper Waitaki that is sacred to them and believe that where there is uncertainty about the environmental effects of the proposals such that a precautionary approach should be adopted.
- 8.22 The Ngāi Tahu “visual evidence” document including maps depicting sites and trails of importance was presented to the hearing shows no “recorded archaeological” sites to be located on the command areas or their close vicinity of the Grampians Station. The statutory acknowledgement over Te Ao Marama / Lake Benmore provides further context to the traditional relationship Ngāi Tahu hold with the downstream receiving environment of the nutrients arising from the proposed irrigation activities on the Grampians Station.

9 UPDATES TO THE SECTION 42A REPORTS

- 9.1 The addendum s42A report of Ms Vesey discussed additional matters that had been identified throughout the hearing, or provided comment on changes proposed by the applicant. These matters are summarised below.

Landscape

- 9.2 Ms Vesey noted that the applicant did not provide a site specific landscape assessment. As such, Mr Glasson’s recommendation that the proposed sites should be declined remained unchanged.

Allocation

- 9.3 Ms Vesey said she had considered the Commissioners’ comments in relation to the additional water sought for conveyance purposes. Derogation approval had been provided by Meridian Energy Limited since she wrote her s42A report. She believed the derogation approval has effectively answered Commissioners’ concerns as the applicant was restricted to taking only the annual volume of water they sought for irrigation. As such, should the applicant wish to continue with water race system requiring water for conveyance, this would need to be subtracted from their total annual volume of 1,428,000 cubic metres – rather than additional water as originally suggested.

Ecosystems

- 9.4 Ms Vesey noted Mr Scarf’s concerns about potential environmental effects at a 1500 L/s minimum would be less than minor. Despite the lack of a detailed assessment of effects on instream values from the lower minimum flow than the WCWARP, she was satisfied that the minimum flow proposed by the applicant has taken into consideration the matters outlined in Policy 4. She considered that effects on ecosystems no longer remain a concern.

Discharge

- 9.5 Following Commissioner Ellison's query in regards to the discharge into the Grays Hills Swamp Ms Vesey talked to Environment Canterbury Land Resources Scientist (Ecology), Mr Philip Grove. Mr Grove advised that given the quality of the water to be discharged (unchanged from that taken from the Grays River), the distance between the discharge location and the swamp (potentially the water may not flow above the surface to the swamp), the rate and restricted volume of water to be discharged; the proposed discharge was likely to have beneficial effects on the Grays Hills Swamp.

Dr Freeman's addendum - Water Quality

- 9.6 Dr Freeman said that the draft FEMP provided by Mrs Johnston has been audited by Environment Canterbury's technical experts. For CRC041542 and CRC041543 they considered that, on the basis of the currently available information, there are significant uncertainties about potential adverse effects on cumulative water quality. Depending on additional considerations relating to issues other than cumulative water quality effects, the applications could be granted, provided that either more information is obtained to reduce the uncertainties and/or subject to strict comprehensive monitoring and response conditions that would enable a rapid and effective control response that would adequately prevent the occurrence of significant adverse effects.
- 9.7 Dr Freeman also noted that some of the OVERSEER input parameters for this applicant seem to be different from that proposed in the AEE and hearing evidence. Of particular concern was that the parameter report indicates Pivots B and C have no irrigation applied (this equates to 275 hectares of the total 385 hectares proposed to be irrigated).

10 APPLICANT'S RIGHT OF REPLY

Mr Chapman

- 10.1 Mr Chapman said that this application needed to be seen in its historical setting. The application for an annual volume was based solely on the consumptive part of the proposal. Water was taken via a race system from the Grays River with a volume of 29 L/s being continuously discharged following the irrigation takes into the same water body. The need for the continuous discharge was to ensure there was a continuous volume, not less than 29 L/s in the race system to stop the pump cavitating. The continuous "divert" flow was not included, but the overall irrigation proposal had fully outlined the need for residual "non-consumptive flows" to be taken and diverted for the proposed irrigation system to be implemented. The applicant requested that any consent issued takes account of the additional 29 L/s required for this proposal.
- 10.2 Mr Chapman also commented upon Mr Glasson's evidence particularly his oral evidence to us in February 2010. Mr Chapman was critical of Mr Glasson's view that the introduction of controls on buffer distances and matters of that sort was a trade off for the continued right to irrigate. This was the instance in particular where Mr Glasson referred to the need for irrigation to be pulled back from a lake margin river or road. Mr Chapman was of the view that this showed a fundamental misunderstanding of the concept of existing environment where by the introduction of exotic grasses had been introduced as a fully permitted activity and can continue to do so under the three applicable territorial plans.
- 10.3 He also referred us to policy 12 of the WCWARP which makes reference to landscape. He noted that this is a policy without any rule to support it. He considered that approach was consistent with territorial authority plans which do not have rules limiting ground cover or irrigation.

Andrew Craig – Supplementary evidence

- 10.4 We also received supplementary landscape evidence from Mr Andrew Craig, which assessed this application in a more particular way than what he had in his Part 1 Landscape Assessment. In his supplementary evidence he sought to clarify the landscape context of the applications particularly with regard to their roadside setting and current land use regimes.
- 10.5 He told us that he had not visited the application sites but that he had travelled Haldon Road in recent times thus he was generally familiar with the landscape setting. He did rely upon the photographic evidence produced by Mr Glasson and other aerial photographs that had been given to him.

- 10.6 Firstly he drew attention to the point that the Mackenzie District Planning Map 34 indicates that the application sites are outside any areas considered significant in the District Plan. He did note that CRC041543 lies next to a Scenic Viewing Area 12.
- 10.7 He reminded us that within the rural zone irrigation is a permitted activity and expressed the view that irrigation might be able to be undertaken in a SVA with the only place where irrigation cannot be undertaken as of right being within sites of natural significance. In that regard he referred us to Rule 15.1.1(a). He did note that there is a site of natural significance close to application sites CRC041542, but that the site would not be affected by the proposed irrigation nor would the scenic viewing area be affected.
- 10.8 He noted that road users in the main will be primarily local land holders and those who wish to gain access to the northern arm of Lake Benmore for recreational purposes which he noted included a small informal camping ground. He was of the view the road clearly does not serve any key destination point for tourists.
- 10.9 He noted that Haldon Road in part is a gravel road and it is classified as a local road in contrast to a state highway which is classified as an arterial. He considered State Highway 8 was a premier tourist route, not Haldon Road but he noted that the effects of irrigation would not be discernible from State Highway 8. He noted that outside of the irrigation season or period the pivot irrigators would be parked perpendicular to the road thereby presenting the least amount of apparatus to passers by.
- 10.10 He referred to the land use context noting that the land on which the pivot irrigators will be located is clearly modified and cultivated. He noted that the sites were devoid of any native plant regimes or other salient natural features.
- 10.11 He accepted that the proposed irrigation will introduce longer term greening into the application sites. The shift of landscape character in his view would be negligible within the context of the setting. He noted the surrounding hills which being elevated and therefore more visible than the flats they encompass will not be affected by the proposed irrigation.
- 10.12 He found that he could not accept Mr Glasson's view that irrigation will have significant adverse landscape effects on the panoramic views from Haldon Road. Rather Mr Craig was of the view that the only visual difference will occur from the presence from the pivot irrigator which he considered to be not only part and parcel of a working farm environment but also anticipated by the District Plan except within sites of natural significance.

11 STATUTORY CONTEXT

- 11.1 The relevant statutory context for a **non-complying** activity is set out in detail in our Part A decision. In accordance with those requirements, we have structured this evaluation section of our report as follows:
- (a) Evaluation of effects
 - (b) Evaluation of relevant planning instruments
 - (c) Evaluation of other relevant s104 matters
 - (d) Section 104D jurisdictional hurdle
 - (e) Part 2 RMA
 - (f) Overall evaluation

12 EVALUATION OF EFFECTS

- 12.1 Drawing on our review of the application documents, the submissions, the Officers' Reports, the evidence presented at the hearing and our site inspection, we have concluded that the effects we should have regard to are:
- (a) Water quality

- (b) Flows and ecosystems
- (c) Efficient Use
- (d) Landscape
- (e) Tangata Whenua Values
- (f) Positive effects

Water quality

- 12.2 In Part A of this decision we rejected the MWRL proposition that all consents sought in this hearing could be granted (with conditions) and without causing cumulative effects. It is incumbent upon us, therefore, to consider (as far as is possible) whether granting this application, in combination with other water permits we grant, will lead to cumulative water quality effects. In this case it means considering the potential effects of granting this application (in combination with others we grant) on:
- (a) the trophic state of the Haldon Arm of Lake Benmore,
 - (b) groundwater chemistry and in particular the MWRL-proposed threshold of 1 mg/L NO₃-N, and
 - (c) periphyton and macrophyte growths in Grays River.
- 12.3 The applicants have proposed various mitigation measures to lessen the risk of their activities contributing to cumulative water quality effects. We need to consider whether the proposed mitigations, are sufficient to avoid a significant water quality problem occurring, and/or whether refinements to the measures proposed are required.
- 12.4 The ultimate receiving water (as far as this application is concerned) is the Haldon Arm of Lake Benmore. In Part A we determined that the Haldon Arm of Lake Benmore can assimilate an increased nutrient load from the granting of consents (with mitigation) and remain within an oligotrophic state. While we did not accept the MWRL proposition as a whole (that all consents could be granted) we did accept that the proposed (MWRL) increased nutrient load from irrigation would not cause a more than a minor effect to the Haldon Arm of Lake Benmore; mainly because of the high inflows from the Ōhau B canal and the concomitant relatively short residence time.
- 12.5 We have also accepted the proposition that effects of irrigation on groundwater may be considered minor where the NO₃-N concentration remains < 1 mg/L. This appears to be a reasonable interpretation of the PNRRP objectives for groundwater in the Mackenzie Basin, and there have been no challenges to it. No specific evidence on groundwater movement or depth on Grampians Station other than Mr Urquart's anecdotal account (evidence for Gray's Station) that large flows in the Tekapo River (western side of station) raise the groundwater levels throughout the eastern side of the basin including Grays River. Together with evidence that normal flows in Grays River have decreased since the commissioning of the power scheme suggest that there is a strong hydraulic connection between the Tekapo and Grays Rivers, and that historically at least, the Tekapo recharged groundwater that discharged into the Grays. Thus we infer that groundwater used to (and still does when flows in the Tekapo R are high) in a west to east direction. It is therefore reasonable to assume (in the absence of further data) that any leachate from the proposed irrigation area will eventually discharge to the Grays River.
- 12.6 As noted by Mr McIndoe, the purpose of the NO₃-N groundwater provisions in the NRRP is to protect surface waters. In this regard the main issue is the development of nuisance periphyton growths in Grays River and/or streams draining to Grays River.
- 12.7 In Part A we rejected the MWRL proposition that we should allow a 25% increase in periphyton above that calculated as the current biomass in the WQS. Apart from its arbitrary development, we are of the view that to accept the 25% increase guideline is contrary to the NRRP; both the version at the time of this application, and the operative version, which has objectives to maintain or improve effects related to water quality, and not permit a degradation. As noted in Part A we are of the view that the MfE periphyton guidelines are applicable in the Mackenzie Basin environment and should be used. We are, therefore, unable to accept the MWRL calculations with respect to limiting ecosystem.

- 12.8 We note the evidence of Dr Coffey for MWRL who reported nuisance growths of periphyton at the 'downstream' Grays site in the absence of any irrigation in this sub-catchment. In our view this reinforces the likelihood of a strong groundwater connection between the Tekapo and Grays River, and that leachate from irrigation may cross surface water boundaries.
- 12.9 We note that OVERSEER modelling for this property was carried out using the developed setting, following advice from the applicants consultant (Mr McFarlane) that the property is unlikely to ever reach a 'highly developed' state. We point out that Dr Snow and others advocated using the "Highly developed" setting for pragmatic reasons designed to compensate for OVERSEER's inability to accurately predict leaching rates from the shallow soils common on the Mackenzie Basin. The soils on Grampian Station are at least partially (Pivot C) in that category, and therefore it is likely that the OVERSEER predictions made for this property are underestimated.
- 12.10 Using the more conservative figures for N loss given in Dr Snow's evidence for future farm scenarios (Appendix 4, Table A3) and assuming minimum flow conditions, it is possible that leaching losses could result in nuisance growths of periphyton. This risk can be mitigated we believe through setting back the irrigation area some distance from the edge of the river, and through well designed riparian buffers between the irrigation area and Grays River. We note that such a buffer would also mitigate landscape effects as noted above.
- 12.11 We note that the final FEMP submitted to ECan 22 November 2010, contains specific mitigation provisions relating to fencing, set-back distances, and stock control. We consider these provisions are appropriate and should ensure that localised effects on water quality will be minor.
- 12.12 In relation to cumulative effects, we consider that any such effects will be restricted to nuisance periphyton growths in Grays River under summer low flow conditions (with Grays Station) and that these effects can be managed by way of conditions requiring reduction of irrigation in the event that maximum periphyton biomass in Grays River exceeds a threshold.

Flows and ecosystems

- 12.13 The applicant has proposed a minimum flow on Grays River at Days Bridge of 1,500 L/s compared with the 1,800 L/s specified in Table 3 of the WCWARP. Whilst all affected parties (applicant, ECAN, Fish & Game) agree that 1,500 L/s is the best estimate of 5Y7DLF upon which the WCWARP environmental flow provisions were based, the issue we need to consider is whether the revised minimum flow (1,500 L/s) is appropriate for this consent and will adequately protect instream values and ecosystems.
- 12.14 We note a memorandum dated 26 August 2009 (Gillian Lewis to Dr Bryan Jenkins, CEO ECAN) and countersigned by Dr Jenkins, agreed to a revision of minimum flows (5Y7DLF) for a number of streams and rivers in the Upper Waitaki Catchment for which environment flows were specified in Table 3 of the WCWARP. However the Grays River was not amongst those cited in the memorandum, despite the revised flow data being available by this date. Therefore the minimum flow of 1,800 L/S specified in Table 3 of the WCWARP remains the minimum flow for the Grays River.
- 12.15 We do not agree Mr Scarf or others who suggested a plan change is required to reduce the minimum flow. We have another available option, which is to consider this application as a resource consent for non-complying activity. This resource consent process enables us to depart from the minimum flow of 1800 L/s and grant consent for a non-complying activity with a lower minimum flow, provided we are satisfied that either of the gateway tests under s104(d) can be satisfied.
- 12.16 We acknowledge that all the hydrological experts (Messrs de Joux, Stewart and Scarf) agreed that 1,500 L/s may be a more accurate representation of the 5Y7DLF than that contained in the WCWARP for the Grays River. On this basis, the applicant has encouraged us to make the assumption that this flow will be adequate to protect instream ecosystems, a conclusion that was supported by Ms Vesey. However we note that we received no detailed assessment of effects on instream values from the lower minimum flow.
- 12.17 Although we accept the hydrological evidence regarding the 5Y7DLF, we do not think that it is appropriate to assume that this will adequately protect instream values. We consider that a more holistic approach is required for setting environmental flow regime than simply using flow statistics and that the experts have not adequately taken into account the biological effects of reducing the minimum flow.

- 12.18 For example, based on our above discussion on water quality, we consider that lowering the flow in the Grays River increases the likelihood of nuisance periphyton blooms. As the Grays River already has some evidence of being under stress with respect to periphyton, allowing a lower minimum flow will potentially exacerbate that issue.
- 12.19 As discussed further in our evaluation of relevant planning instruments, the Grays River is classified as Hill-Fed upland which has stringent water quality outcomes associated with it (e.g. max 50 mg/m² periphyton). Reducing minimum flow (or more particularly the length of time the river is at such low flows) will make it much harder to comply with these standards. We therefore consider that it would be irresponsible and inappropriate for us to accept the lower minimum flow.
- 12.20 In addition to nutrients and periphyton, the other issue with reduction in minimum flow is fish and invertebrate habitat. Based on the evidence received, we are not satisfied that this issue has been adequately addressed. The only basis presented for the conclusion that instream values will be protected, is that the 1,800 L/s in the WCWARP was not based on any biological assessment either. Hence the 1,500 L/s based on real measurements must be acceptable. Given that the Grays River is a valued trout fishery, we do not think that this provides a sufficient foundation on which to accept a lower minimum flow, which is in this case the environmental flow regime.
- 12.21 For the above reasons, we conclude that lowering the minimum flow to 1,500 L/s as proposed by the applicants may lead to unacceptable adverse effects on instream values and ecosystems. However if the higher minimum flow of 1,800 L/s was imposed by way of conditions, we consider that the effects of the proposal would be acceptable.

Efficient Use

Irrigation use

- 12.22 Mrs Johnston advised us that the proposed irrigation annual volume of 1,428,000 cubic metres was within irrigation demand for area to be irrigated using methodology in Policy 16(c)(ii) of the WCWARP. Ms Vesey considered the volume reasonable and efficient for soils and rainfall in area. We concur with Ms Vesey that the proposed volume is reasonable and efficient.
- 12.23 The daily application rate of 5 millimetres is likely within the evapotranspiration rates for the area to be irrigated. Furthermore, the applicant has proposed that it keep a log of evapotranspiration and rainfall on a daily basis to ensure that the application of irrigation water will be equivalent to the actual evapotranspiration.
- 12.24 The applicant had advised us metering would be installed after 12 months, however given this is a new proposal, metering would be required before first exercise of this consent if granted.

Distribution Efficiency

- 12.25 The applicant had sought 29 litres per second to ensure the irrigators do not suck air in from the water race. We found it difficult to accept that the applicant could not configure the pumping setup in a manner that avoided the need to abstract an additional 17.5 % to prevent pump cavitation.
- 12.26 We were later advised by Ms Vesey that derogation approval from Meridian Energy had only been obtained for the 1,428,000 cubic metres which does not include the additional water for cavitation prevention. We do however note that further derogation approval was subsequently forwarded to the Council in July 2010.
- 12.27 Overall, we are not satisfied that the proposed additional water for cavitation prevention is reasonable or efficient and conclude that the volume of water granted (if consented) should be limited to that required for irrigation.

Landscape

- 12.28 Mr Craig argues the landscape has been modified already as a result of farming activity. He considers the Haldon Road is not a principal road. He considers the irrigation pivots here proposed will fit within this working landscape as the inclusion of the pivots is a natural progression of the development of the farm.

- 12.29 On the other hand Mr Glasson and Ms Lucas consider views from Haldon Road over the wider basin. They note Haldon road is elevated and provides a very important view point over the basin. They consider that because of the closeness of the proposed pivots to Haldon Road they will be intrusive in terms of the views from Haldon Road. They rate the overall naturalness of the site to be much higher than Mr Craig's evaluation.
- 12.30 Dr Walker has provided us with the only material we have on terrestrial ecology for the site and she considers that there are high values present in terms of terrestrial ecology. We note that there are a range of RAPs and STWWIs in close proximity to the site.
- 12.31 On our site inspection we did travel down Haldon Road and it is the case that we found the views from Haldon Road to be of high value. Given Haldon Road is elevated there are both short and longer term views over the basin. The full breadth of the basin is available in the view from Haldon Road.
- 12.32 We think that given the proximity of the pivots particularly the sequence of them along Haldon Road for a distance of some 3.5 kilometres they will be intrusive on views from Haldon Road.
- 12.33 We accept that pivots located at a distance from viewpoints are not nearly as intrusive. We reached the view that the effects on the more distant views will be adversely affected by the presence of these pivots in sequence particularly given that they are located very close to the Haldon Road boundary.
- 12.34 We do not accept that it makes a significant difference that Haldon Road may be utilised by locals in contrast to those who may use State Highway 8. We still think that Haldon Road is an important tourist road. This was identified as such within the recent Environment Court decision by Judge Jackson (*High Country Rosehip Orchards Ltd v Mackenzie District Council* [2011 NZ ENV C387]). We note that the applicant did not propose any mitigation measures notwithstanding the concerns expressed in the investigating officer's report. We do acknowledge that Mr Craig's assessment differs markedly from that of Mr Glasson.
- 12.35 On balance we prefer the views expressed by Mr Glasson and Ms Lucas and we conclude that the pivot irrigators located so close to Haldon Road will have very intrusive impacts on views from Haldon Road. This will lead to a level of effect which will be in our view, will be significant.

Tangata Whenua Values

- 12.36 The applicant did not provide an assessment of cultural values. The general area is part of the traditional trails that linked the waterways and passes into Te Manahuna (Mackenzie Basin) and that supported seasonal mahinga kai activity. There are no recorded archaeological sites in the general area of Grampians Station.
- 12.37 The nutrient load from this proposed activity is likely to drain toward the Haldon Arm and potentially impact on the Gray River, Lower Tekapo River and Haldon Arm as a consequence.
- 12.38 Ngāi Tahu identified as a high priority the protection of the Lower Tekapo and Haldon Arm from any deterioration in water quality and habitat values. Achieving this priority is reliant on maintaining water quality and health of the tributaries and ground water feeding the Lower Tekapo River and Haldon Arm.
- 12.39 Ngāi Tahu mahinga kai restoration aspirations for the lower catchment will ultimately include the consumption of kai taken from the waters in the catchment and a physical interaction with the waterways such that confidence in the water quality being suitable for such activity is a significant issue to be satisfied.
- 12.40 As Ngai Tahu have not made a specific representation on Grampians Station we have chosen to consider the cultural implications in relation to the mitigation measures the applicant propose to minimise offsite nutrient losses and instream effects. While the overall stock carried by Grampians Station will increase the effects of this will be distributed over the whole station. Our view is that there is insufficient certainty that maintaining and improving the instream values of importance to Ngāi Tahu is likely to be achieved if the minimum flow of 1,500 L/s as sought by the applicant is granted.

Positive effects

- 12.41 We accept that the use of water for irrigation may result in improved productivity of the land and positive economic benefits for the wider community.

Key conclusions on effects

- 12.42 In relation to the actual and potential effects of the proposal, our key conclusions are as follows.
- 12.43 We do not accept that a minimum flow of 1,500 L/s based on the 5 year 7 day MALF is appropriate to protect instream ecosystems.
- 12.44 We are also of the view that the landscape effects of this proposal are for the reasons already advanced will be significant.
- 12.45 In terms of efficient use of the water we are of the view that the volume is reasonable and efficient for soils and rainfall in the area. However we do not agree with the additional 29 L/s to prevent pump cavitation. There are a number of alternatives available to prevent pump cavitation and we were not presented with any evidence to explain why they could not be used.
- 12.46 In terms of water quality we conclude that particularly having regard to the mitigation measures proposed in the FEMP in relation to fencing and setback distances and stock control that localised effects on water quality will be minor.
- 12.47 In relation to cumulative effects on water quality we consider that such effects will be restricted to nuisance periphyton growths in the Grays River under summer low flow conditions but we think that (if granted) these effects could be managed by way of conditions requiring reduction of irrigation in the event that the maximum periphyton and biomass in the Grays River exceeds inappropriate threshold level.

13 EVALUATION OF RELEVANT PLANNING INSTRUMENTS

- 13.1 Under s 104(1)(b) RMA, we are required to have regard to the relevant provisions of a range of different planning instruments. Our Part A decision provides a broad assessment of those planning instruments and sets out the approach we have applied to identification and consideration of the relevant provisions. The following part of our decision should be read in combination with that Part A discussion.
- 13.2 In relation to the current applications, we consider that the most relevant and helpful provisions are found in the regional plans, including in particular the WCWARP and the NRRP. In addition, the Proposed and Operative CRPS and the relevant District Plans are of assistance in relation to landscape issues that arise.
- 13.3 The following sections of this decision provide our evaluation of the key objectives and policies from these planning instruments. We have organised our discussion in accordance with the key issues arising for this application.

Water quality

- 13.4 In relation to water quality, the key documents we have considered are the WCWARP (incorporating the objectives of the PNRRP and the operative NRRP provisions).
- 13.5 In relation to the WCWARP, we consider that Objective 1 is the critical objective. In particular, Objective 1(b) seeks to safeguard life-supporting capacity of rivers, lakes, and Objective 1(d) seeks to safeguard the integrity, form, functioning and resilience of a braided river system.
- 13.6 We have determined that granting these consents with conditions (incorporating mitigations set out in the FEMP) will help to minimise nutrient loss from the irrigated area. The load arising from this activity will not cause (in combination with other consents we grant in the Haldon Arm catchment) more than minor effects of the trophic status of the Haldon Arm of Lake Benmore.
- 13.7 We are also satisfied that the activity, with mitigations, should not result in nuisance growths of periphyton in Grays River and can be managed by way of conditions requiring the reduction of irrigation in the event that monitoring demonstrates the exceedance of thresholds.

- 13.8 Overall, we conclude that a grant of consent, with conditions, would be consistent with Objective 1(b) and 1(d) WCWARP.
- 13.9 Objective 1(c) requires us to manage waterbodies in a way that maintains natural landscape and amenity characteristics and qualities that people appreciate and enjoy. Given our findings in terms of effects on water quality and periphyton growths, then our view is that granting consent would be consistent with Objective 1(c).
- 13.10 We note that Objectives 2, 3, 4, and 5 are “in the round” deal with and provide for the allocation of water. The critical qualification is that water can be allocated provided that to do so is consistent with Objective 1. Given the findings we have made about Objective 1 we conclude that allocating water in terms of the balance objectives would be consistent with the overall scheme of the WCWARP. We reach this view taking into account the national and local costs and benefits (environmental, social, cultural and economic) of the proposal, as required by Objective 3.
- 13.11 Policy 13 links the WCWARP to the PNRRP (as it existed at the time) by requiring us to have regard to how the exercise of the consent could result in water quality objectives of the PNRRP not being achieved. As we explained in our Part A decision, we have considered the objectives of the PNRRP and the now operative NRRP in relation to the current proposal. However we have generally given greater weight to the NRRP provisions on the basis that they represent the current approach for achieving the common goal of protecting water quality.
- 13.12 Under the NRRP, the Grays River is classified as Hill-fed Upland. Objective WQL1.1 of the NRRP seeks to ensure that the water quality of such rivers is managed to at least achieve the outcomes specified in Table 5. A key indicator for these applications is that maximum chlorophyll-a should be less than 50 mg /m², which has associated water quality performance standards for DRP and DIN (Table WQL16) of 0.006 and 0.21 mg/L, respectively.
- 13.13 We understand that the applicant and reporting officer agreed on periphyton water quality conditions that included a 120 mg/m² Chlorophyll *a* standard (and an early warning trigger of 90 mg/m² Chlorophyll *a*) for the Grampian Station. We appreciate that when those parties reached that agreement the NRRP was not operative, and issues relating to water quality objectives and standards had not reached the status that we have today.
- 13.14 However, we must have regard to the current provisions of the NRRP and therefore we have given considerable thought to the situation that applies to the Grays River. We note the following:
- (a) Dr Coffey’s (MWRL) evidence of nuisance growths occurred in downstream reaches of Grays River in the apparent absence of irrigation;
 - (b) Dr Coffey’s evidence that the structure of aquatic macroinvertebrate communities indicated instream habitat quality available for macroinvertebrates was poor at Sampling Site Grays Upper and fair at Sampling Site Grays Node. Dr Coffey suggested that habitat rather than water quality may be the cause;
 - (c) Evidence of groundwater transfer between the Tekapo River and Grays River at high flows;
 - (d) Evidence that flows in Grays River have been reduced markedly since the completion of the Waitaki Hydro-electricity Scheme;
 - (e) Tributaries of Grays River are classified as “Spring-fed Upland” which have the same maximum periphyton standard (50 mg/m² chlorophyll *a*) but water quality performance standards for DRP and DIN of 0.007 and 0.10 mg/L respectively; and
 - (f) The New Zealand Periphyton Guidelines, that we were provided with at the hearing and heard were a critical source for the NRRP specified outcome, provide for 50 mg/m² chlorophyll *a* as a guideline for oligotrophic streams with diverse “clean-water” benthic invertebrate communities. While there is scant data, Dr Coffey’s evidence suggests that this may not apply to Grays River.
- 13.15 Because the plan is unequivocal with respect to water quality outcomes expected for Grays River and tributary inflows have the same or high water quality expectations, we consider that (if granted) the standard trigger for Grays River should be 50 mg/m² chlorophyll *a* together with

water quality performance standards for DRP and DIN of 0.006 and 0.21 mg/l respectively. We also consider that there is no case for an early warning trigger. However, given our overall decision on this proposal, we have not commented on these matters further.

- 13.16 Lake Benmore (including the Haldon Arm) is classified as an "Artificial On-River Lake" under the NRRP. Objective WQL1.2 of the NRRP seeks to ensure that the water quality of the lake is managed to at least achieve the outcomes specified in Table 6, including a maximum Trophic Level Index ("TLI") of 3 (i.e. oligotrophic-mesotrophic boundary). For the reasons discussed above, we consider that granting consent to the proposal would be consistent with this objective and would not (in combination with others we grant) caused the TLI maximum to be breached.
- 13.17 Overall then having regard to the scheme of the WCWARP and the NRRP we reach a conclusion that, with appropriate mitigation, granting consent to the proposal could be consistent with the key objectives and policies of both of these plans relating to water quality.

Environmental flow and level regimes

- 13.18 Policies 3 and 4 of the WCWARP refer to the setting of environmental flow and level regimes to achieve the objectives of the WCWARP. In addition, Policy 12 seeks to establish an allocation for each relevant activity within the catchment and requires consideration of the effects on other users. This is reflected in the rules of the PNRRP which specifies minimum flows and levels for water bodies and allocation limits for specific activities.
- 13.19 As discussed in detail above in our evaluation of effects, the applicant is proposing to adopt a minimum flow that does not comply with the requirements of the WCWARP and has not provided sufficient evidence to convince us that this is appropriate. On this basis we consider that the proposal is contrary to these objectives and policies of the WCWARP regarding environmental flows and levels.

Efficient use of water

- 13.20 Policies 15 – 20 provide for an efficient use of water so that net benefits are derived from its use and are maximised and waste minimised. In particular, Policy 16 requires us to consider whether the exercise of these consents would meet a reasonable use test in relation to both the instantaneous rate of abstraction and the annual volume for take, use, dam or divert.
- 13.21 Objective 4 of the WCWARP requires us to promote the achievement of a high level of technical efficiency in the use of allocated water. Application by spray within the constraints of an annual volume will require a high degree of efficiency to ensure that crops and pasture are not stressed in extreme conditions and water is not wasted.
- 13.22 As discussed in our evaluation of effects, we are satisfied that the proposed annual volumes of water for irrigation reflect an efficient and effective use of water and that the reasonable use test can be met. However we are not convinced that diverting an additional 29 L/s of water is reasonable or efficient.

Landscape

- 13.23 We discussed the relevant objectives and policies for landscape in our Part A Decision. In summary these are primarily found in the Proposed and Operative CRPS and the NRRP. In broad terms these provisions seek the protection of outstanding natural landscapes from inappropriate use and development.
- 13.24 In considering these provisions we are informed by the provisions of the Mackenzie District Plan which identifies the applicant's property as having a Rural zoning. The District Plan includes objectives of a similar vein to the CRPS, which seek to protect distinctive and outstanding landscapes from development that would detract from those landscapes.
- 13.25 The objectives and policies contained within the Mackenzie District Plan broadly mimic those that are contained in the higher order policy documents. Objective 3A seeks to protect and sustain the distinctive and outstanding natural landscapes and features of the district from subdivision and development that would detract from those landscapes. Reference is made to Section 6(b) RMA in the explanation and reasons.
- 13.26 Related policies seek the same or similar outcomes, namely recognising the Basin has a distinctive and highly valued landscape containing Outstanding Natural Landscapes through the

Mackenzie Basin subzone within the rural zone and to protect the Basin from inappropriate subdivision use and development.

- 13.27 Objective 3B seeks to encourage a healthy productive economy, environment and community within, and maintain the identity of, the Mackenzie Country. Within the explanation and reasons supporting this Objective the Plan provides that sustainable management requires a balance to be found that provides for social, economic, and cultural wellbeing of the community while sustaining natural and physical resources and safeguarding the environment from adverse effects.
- 13.28 Objective 3C deals with landscape values and seeks the protection of natural character of the landscape and margins of lakes, rivers, and wetlands and for natural processes and elements that contribute to the District's overall character and amenity.
- 13.29 Policy 3C seeks to avoid adverse impacts on outstanding natural landscape features of the Basin. For our purposes, in particular from structures. The explanation and reasons refer to structures associated with more intensive farming such as large irrigators or industrial style buildings. The Plan notes that when placed in the foreground of views these structures can reduce scenic values and the sense of openness valued within the Basin.
- 13.30 In the course of our deliberations we had occasion to read and consider the recent Environment Court decision by Judge Jackson (*High Country Rosehip Orchards Ltd and Others v Mackenzie District Council* 2011-NZ EnvC-387), in which the Court considered the objectives and policies in the Mackenzie District Plan as they related to landscape. We note that the decision is an interim decision in all respects with the exception that it is a final decision in respect of the finding that the Mackenzie Basin as a whole (excluding Twizel and Tekapo townships, Mr Densem's Landscape Unit 54 west of Twizel, and the Dobson River Catchment) is an Outstanding Natural Landscape. All other determinations or judgments are interim. We too in our approach have accepted that the Mackenzie Basin is an Outstanding Natural Landscape.
- 13.31 In addition to the above, the Court promoted suggestions for change to the provisions of the Mackenzie District Plan. Policy 3B(1) as per the Court's decision seeks to recognise that there are some areas where different types of development and use (such as irrigated pastoral farming and other activities) are appropriate and to identify these areas. Equally, there are many areas according to Policy 3B(1) as amended where such use and development is inappropriate. We have been called upon to make a decision where development of the sort we are here interested in has been identified as appropriate.
- 13.32 Of particular interest we note that the Environment Court revised Objective 3B forming the interim conclusion that a more focused and more appropriate objective for landscape of the Mackenzie Basin seeks to protect and enhance the ONL. Among other matters, this objective seeks to achieve the following outcome:

to protect and enhance the outstanding natural landscape of the Mackenzie Basin subzone in particular the following characteristics and/or values:

- (a) the openness and vastness of the landscape;*
- (b) the tussock grasslands;*
- (c) the lack of houses and other structures;*
- (d) residential development limited to small areas in clusters;*
- (e) the form of the mountains; hills and moraines, encircling and/or located in, the Mackenzie Basin;*
- (f) undeveloped lakesides and State Highway 8 roadside;*

- 13.33 As we saw it, the balance of the Environment Court's discussion around the policies focused primarily on views from state highways and tourist roads. Turning in detail to Policy 3B(8) as per the Environment Court's interim decision, the Court there reached an interim conclusion that location of structures such as large irrigators were to be avoided close to state highways or in such positions were they limited the screening of views of the ONL of the Mackenzie Basin. Also, outcomes sought were to minimise the adverse effects of irrigation on pasture adjacent to the

state highways or tourist roads. We note that the lack of visibility from SH8 was an important factor in support of our conclusions on landscape.

- 13.34 We note in the Court's decision as well as State Highways it also considered other roads and views from them were important. In that category it included Haldon Road to the Mackenzie Pass Road and the latter road.
- 13.35 In terms of an approach against the backdrop of these revisions to objectives and policies we note that the Court expressed the view that while changes are occurring there should be scope for further modification provided it does not get out of control. The Court noted that given the symbolic importance of the Mackenzie Basin in New Zealander's idea of "High Country" the Court considered that all decision makers including landowners need to be cautious about further changes to the basin. The Court noted that cumulative effect of small changes should also be taken into account.
- 13.36 Drawing together the discussion on policies and objectives then we think that while we acknowledge there are no scenic viewing areas or areas of significance that are immediately impacted upon by this proposed development as provided for in the Mackenzie District Plan we must nevertheless proceed on the basis of accepting that this landscape is an outstanding natural landscape. We therefore have to consider whether or not the development here proposed is an appropriate or inappropriate development having proper regard to our s6(b) considerations. Simply because the plan does not make explicit provisions in terms of scenic viewing areas and the like we cannot ignore the objective and policy base of the plan nor can we ignore s6(b).
- 13.37 The objective and policy base of the plan, particularly that as amended on an interim basis by the Environment Court, recognises the outstanding natural landscape that is the Mackenzie basin. It recognises and provides for the importance of views from tourist roads. In this instance, we think that the grant of consent immediately alongside Haldon Road particularly having regard to the lack of any mitigation measure proposed and the sequence of large size pivots over a distance of some 3.5 kilometres would not be consistent with the objective and policy base of the Mackenzie District Plan nor would it sit easily with s6(b).
- 13.38 If there were available a setback distance where the setback area was kept in tussock grasslands or some other mitigation measure then this evaluation may have a differing result. However no such mitigation measures have been proposed.
- 13.39 We have earlier rejected Mr Craig's assessment that the landscape is highly modified. We think he took too narrow a view and he did not consider the broader landscape in which this particular application site sits. When a consideration from that stand point is undertaken we think that it is inescapable that the landscape has high natural values and exhibits and possesses the traits of outstanding natural landscape.
- 13.40 In particular we think that the grant of consent would be inconsistent with Policy 3B(8) which seeks to minimise the adverse effects of irrigation of pasture adjacent to the State Highways or tourism roads and also requires to manage the sensitive location of structures such as large irrigators to avoid or limit screening of views of the outstanding natural landscape of the Mackenzie Basin. In our assessment of effects we have concluded that modern pivot irrigators do have an adverse effect on landscapes. Their industrial appearance and length we think undoubtedly reduce the naturalness of any area in which they are located.
- 13.41 We do note that the Court did consider the Grampian Station in its decision and recorded that, subject to any unknown ecological constraints, it did not see any particular difficulty in landscape terms with further irrigation and intensive farming activities on the western side of Haldon Road. The Court did note that care should be taken to keep the irrigation equipment out of the scenic viewing area on the western side of the road opposite Mackenzie Pass Road intersection (being SVA10). While the northern most placed pivot is close to SVA 10, it is not within it.
- 13.42 We do acknowledge that our view differs from that expressed by the Court. We do think however that in contrast to the Court we have had presented to us detailed landscape assessments in relation to this particular site. So we conclude that based on this more detailed assessment of the subject site, the outcome we reached is available to us notwithstanding it differs with the Court's evaluation.
- 13.43 Overall then we consider that the proposal in its current form would represent an inappropriate use or development of this site and would not achieve consistency with the relevant objectives and policies particularly with the proposed and operative CRPS and the Mackenzie District Plan.

Tangata whenua

- 13.44 Objective 1(a) of the WCWARP relates to the integrity of mauri and is closely linked to Objective 1(b). If we are satisfied that the health of a particular waterbody is being safeguarded, then the mauri is being safeguarded also.
- 13.45 Objective WQN1 from Chapter 5 NRRP seeks to enable present and future generations to access the region's surface-water and groundwater resources to gain cultural, social, recreational, economic, and other benefits while (c) safe-guarding their value for providing mahinga kai for Ngāi Tahu and (d) protecting wāhi tapu and other wāhi taonga of value to Ngāi Tahu. This Objective aligns with the Ngāi Tahu philosophy "Ki Uta, Ki Tai" or recognising the interconnected nature of the Waitaki catchment and safeguarding the associated cultural values. In our assessment of effects for this application we consider that it is inconsistent with this Objective.
- 13.46 Objective WTL1(a) and (d) from Chapter 7 NRRP seeks to achieve no overall reduction in the contribution wetlands make to the relationship of Ngāi Tahu and their culture and traditions with their ancestral lands, water, mahinga kai sites, wāhi tapu, and wāhi taonga. This application aligns with the Ngāi Tahu approach of ensuring that the proposed activities individually or cumulatively do not have adverse effects on waterways and wetlands of the receiving waters of Grays River, Lower Tekapo River, and Haldon Arm. We find that this proposal is within the acceptable thresholds for water quality and would be inconsistent with this Objective.

Key conclusions on planning instruments

- 13.47 For all of the above reasons we consider that, with the imposition of appropriate conditions granting consent would generally be consistent with the objectives and policies of the relevant plans in respect of water quality and efficiency. However in terms of environmental flows and landscape values we are of the view that granting consent would be inconsistent with the objectives and policies of the relevant plans.

14 EVALUATION OF OTHER RELEVANT S104 MATTERS

- 14.1 Under s104(1)(c), we are required to have regard to any other matter that we consider to be relevant and reasonably necessary to determine the application.
- 14.2 Given that the proposed take and use is a non-complying activity, one issue of potential relevance under this heading is the potential impact on the integrity of the WCWARP. While this was not discussed in detail at the hearing, we are mindful that approving a non-complying activity without any unique or distinguishing factors could compromise the integrity of the plan. For example, given the proposed take breaches the minimum flow limits in this case, approving the proposal could send the signal that the limits in the WCWARP are of no consequence or importance.
- 14.3 This is obviously an outcome we are seeking to avoid and emphasise that the breach of the minimum flow was an issue that we have carefully considered. To avoid any precedent or integrity effect, we consider that there must be clear evidence provided that a departure from the requirements of the WCWARP is justified in the circumstances. For the reasons discussed above, we are not satisfied that this has been provided in this case and the potential effect on the integrity of the WCWARP remains a live issue if this proposal was to be granted.

15 SECTION 104D JURISDICTIONAL HURDLES

- 15.1 Based our evaluation under section 104, we now move to consider whether either of the jurisdictional hurdles under section 104D of the RMA can be met.

Would the adverse effects be minor?

- 15.2 The assessment is whether or not we are satisfied that if consent is granted the adverse effects of the activity on the environment will be minor. In this context, minor means lesser or comparatively small in size or importance and the judgment is to be made taking the adverse effects as a whole.
- 15.3 Our key conclusions on the adverse effects of this proposal are listed above. Although some of the adverse effects will be minor or less than minor, the most troubling issues for us have been in relation to environmental flows and landscape. Based on the evidence received and for the

reasons given above, we are not satisfied that these adverse effects will be minor. The first jurisdictional hurdle has therefore not been met.

Would the activity be contrary to the objectives and policies?

- 15.4 In applying the second jurisdictional hurdle, the word contrary is given a meaning of more than just non-complying, but opposed to in nature, different to, or opposite, We are required to consider whether the proposed activity would be contrary (in that sense) to the objectives and policies of the plan in an overall consideration of the purpose and scheme of the plan.
- 15.5 The relevant plan under which consent is required is the WCWARP. We have only focussed on this plan for the purpose of the S104D test, but consider the other relevant plans (e.g. Mackenzie District Plan, CRPS) as part of the exercise of our overall discretion.
- 15.6 We have provided an evaluation of the relevant objectives and policies of the WCWARP (including the relevant provisions of the PNRRP incorporated by reference) earlier in this decision. In summary, we find that due to the non-compliance with the required minimum flow in the WCWARP and the potential effects associated with this, the proposal is contrary to the relevant objectives and policies when considered as a whole. We are therefore not satisfied that the second jurisdictional hurdle has been met.

Conclusion

- 15.7 For the reasons identified above, we have determined that neither one of the jurisdictional hurdles are satisfied in this instance. As neither of the jurisdictional thresholds is satisfied, we do not have the ability to grant consent. Nonetheless, for completeness we discuss Part 2 matters below before providing our overall evaluation.

16 PART 2 RMA

- 16.1 Section 104(1) states that the matters which we have discussed above are subject to Part 2, which covers section 5 through section 8 inclusive. These sections are set out in full in our Part A decision and are discussed below in the context of the current applications.

Section 6 – Matters of National Importance

- 16.2 Section 6 identifies matters of national importance that we must “recognise and provide for” when making our decision, including in particular preserving the natural character of lakes and rivers (s6(a)), protecting outstanding natural features and landscapes (s6(b)) and the relationship of Māori with the environment (s6(e)).
- 16.3 In respect of s6(a) we recognise that preservation of the natural character of lakes and rivers is the imperative. We think that because of our finding in terms of the water quality issues, in all respects other than minimum flow, the grant of consent with mitigation measures could recognise and provides for the preservation of the natural character of lakes and rivers. However the lower minimum flow proposed would not be consistent with this requirement.
- 16.4 In terms of s6(b), we have evaluated the natural features and landscape, primarily by reference to the relevant planning instruments. We reach the view that the grant of consent in this case is inappropriate because it will not protect the features of the outstanding natural landscape of the Mackenzie Basin.
- 16.5 In terms of section 6(c), it is our view, taking into account the evidence received, that there are not areas of significant indigenous vegetation and significant habitats of indigenous fauna that are at risk thus requiring protection as a consequence of the grant of consent.
- 16.6 In relation to sub-section (e), we consider the activity with the proposed mitigations measures and conditions will not avoid adverse impacts on s6(e) matters.
- 16.7 For the above reasons, we consider that granting consent to the proposal would not adequately recognise and provide for s6 matters, as we are required to do under the RMA.

Section 7 – Other Matters

- 16.8 Section 7 lists “*other*” matters that we shall “*have particular regard to*”. We make the following observations in relation to each of those matters as they are relevant to this application, referring to the sub paragraph numbers of s7:
- 16.9 Subsection (a), is represented by providing tangata whenua the opportunity to exercise or express kaitiakitanga of the natural and physical resources in accordance with tikanga Māori. We note that Grampians Station has not been identified by Ngāi Tahu as an application of concern. We consider that despite the proposed mitigation measures and conditions the activity will have more than minor localised and cumulative adverse effects on water quality and mahinga kai values.
- 16.10 Sub-section (b) relates to the efficient use and development of natural and physical resources. Relevantly in this case is water. We have determined that the volumes of water we are prepared to grant and the methodology of its conveyance and distribution, results in the efficient use and development of the water resource.
- 16.11 Sub-section (c) refers to the maintenance and enhancement of amenity values. A key aspect of amenity values is appreciation of the landscape, which we consider will not be maintained or enhanced if this proposal is granted.
- 16.12 In terms of sub-sections (d) and (f), we have had particular regard to the intrinsic values of ecosystems and the maintenance and enhancement of the quality of the environment. In addition, sub-section (h) requires that we have regard to the protection of habitat for trout and salmon. In relation to instream ecosystems of the Grays River, we are not satisfied that the proposed minimum flow will safeguard these values.
- 16.13 Having particular regard to the above matters in the context of section 7, we conclude that the grant of consent could not be supported

Section 8 – Treaty of Waitangi

- 16.14 Finally, section 8 requires that we shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).
- 16.15 The cultural values of tangata whenua are appropriately recognised in the relevant planning documents applicable to the Mackenzie Basin sufficient to alert applicants to the need to address such values. We are satisfied that the notification of the appropriate Runangā and tribal authority has been followed and that the applicant was a contributor to the general assessment of the impact of irrigation activities on cultural values.
- 16.16 We are satisfied that the consultation procedures provided Ngāi Tahu with the opportunity to understand and respond to the proposed activity, albeit in conjunction with a large number of applications in the Mackenzie Basin.

Section 5 – Purpose of the RMA

- 16.17 Turning now to the overall purpose of the RMA, that is, “to promote the sustainable management of natural and physical resources”.
- 16.18 In our view for the reasons given earlier in this decision, the proposal will not promote the sustainable management of natural and physical resources. While it will allow the productive use of land, a grant of consent would we think lead to unacceptable effects on the outstanding natural landscape of the Mackenzie Basin. In addition, we consider that the proposed minimum flow is not appropriate to ensure protection of the instream values of Grays River.
- 16.19 In particular section 5 of the RMA requires that people and communities of the Mackenzie Basin and those who visit it are enabled to provide for their wellbeing and health and safety while sustaining the potential of the natural and physical resources which make up the landscape to meet the reasonably foreseeable needs of future generations. One such need is that future generations should be able to experience the iconic Mackenzie Basin landscape. This need would not be met in this location if consent was granted.

17 OVERALL EVALUATION

- 17.1 If an application for a non-complying activity passes through either of the jurisdictional hurdles in s104D, then there is a discretion as to whether consent should be granted. This requires an overall judgment to achieve the purpose of the Act and is arrived at by:
- (a) Taking into account all the relevant matters identified under s 104;
 - (b) Avoiding consideration of any irrelevant matters;
 - (c) Giving different weight to the matters identified under s 104 — depending on our opinion as to how they are affected by the application of s 5(2)(a), (b), and (c) and ss 6-8 — to the particular facts of the case; and then in light of the above; and
 - (d) Allowing for comparison of conflicting considerations, the scale or degree of conflict, and their relative significance or proportion in the final outcome.
- 17.2 On the one hand, there are real benefits from allowing the diverting and use of water. They are the increase in production from the farm station and the economic benefits that flow. However in this case that outcome cannot be met while at the same time sustaining the potential of the natural and physical resources of the landscape. We conclude that the development here proposed against the backdrop of an outstanding natural landscape is inappropriate.
- 17.3 On balance we prefer the views expressed by Mr Glasson and Ms Lucas and we conclude that the pivot irrigators located so close to Haldon Road will have very intrusive impacts on views from Haldon Road. We consider that the proposal in this location is incompatible with the outstanding natural landscape of the Mackenzie Basin and lead to a level of effect which will be in our view, will be significant. In addition, it is contrary to the objectives and policies of the CRPS and the Mackenzie District Plan in relation to landscape and at odds with s6(b) of the RMA, which seeks to protect outstanding natural landscapes from inappropriate use and development.
- 17.4 We also consider that the lower minimum flow of 1,500 L/s for the Grays River is not appropriate to protect the ecosystems and values of the Grays River and that the higher minimum flow in the WCWARP should be adhered to. This issue results in the proposal being classified as a non-complying activity that is contrary to the objectives and policies of the WCWARP and which fails to meet either of the threshold tests under s104D.
- 17.5 On this point, we acknowledge that we had the option of imposing the higher minimum flow of 1,800 L/s and granting consent on this basis (as we have done for the nearby Grays Hill application – CRC042661). This would have altered the status of the activity from discretionary to non-complying and avoided the need to comply with the s104D threshold tests. However, we consider that even if this approach was adopted, the proposal would still be declined on landscape grounds alone.
- 17.6 In relation to the discharge application, because we determined that we would not allow the additional 29 L/s of water for cavitation purposes, the discharge activity is redundant. For these reasons we have not assessed either the effects of the discharge nor have we assessed the activity against the relevant objectives and policies.
- 17.7 Having reviewed the application documents, all the submissions, taking into account the evidence to the hearing and taking into account all relevant provisions of the RMA and other relevant statutory instruments we have concluded that the outcome which best achieves the purpose of the Act is to **decline** consent to all applications.

18 DECISION

- 18.1 Pursuant to the powers delegated to us by the Canterbury Regional Council; and
- 18.2 For all of the above reasons and pursuant to sections 104, 104B and 104D of the Resource Management Act 1991, we **DECLINE** applications **CRC041542**, **CRC041543** and **CRC041545** by **A. N. Hope**.

DECISION DATED AT CHRISTCHURCH THIS 29th DAY OF MARCH 2012

Signed by:

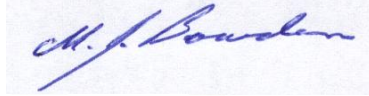
Paul Rogers



Dr James Cooke



Michael Bowden



Edward Ellison

